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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,259

07/24/2006

Ewald Schneider

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EXAMINER

ADMASU, ATNAF S

ART UNIT

PAPER NUMBER

4171

MAIL DATE

DELIVERY MODE

08/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,259	Applicant(s) SCHNEIDER, EWALD	
	Examiner ATNAF ADMASU	Art Unit 4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/11/2005 and 4/21/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Objection

1. In the specification, it is not clear what "melam" denotes (see paragraph [0007]).
Appropriate correction is required.

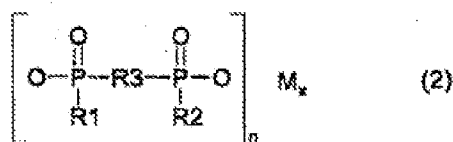
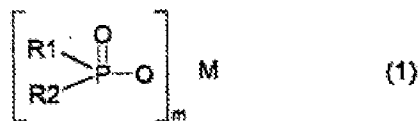
Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 - 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleiner et al. (US 5773556) in view of Koch et al. (US 5071924).**

Regarding claims 1 - 8, the present invention claims flameproof polyamide molding compositions, comprising a) 30-80% by weight of a semi-aromatic, partially crystalline polyamide b) 1-30% by weight of a flame retardant, containing a phosphinic acid salt of formula (I) and/or a diphosphinic acid salt of formula (II) and/or polymers thereof wherein

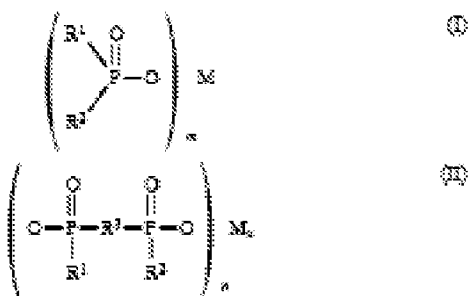


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R1, R2 are the same or different and mean C₁-C₆ alkyl, linear or branched and/or aryl, R3 means C₁-C₁₀ alkylene, linear or branched, C₆-C₁₀ arylene, -alkyl arylene or aryl alkylene; M means metal ion from the 2nd or 3rd main or auxiliary group of the periodic table; m means 2 or 3; n means 1 or 3; x means 1 or 2, c) 5-60% by weight of a fibre- or particle-like filler or mixtures thereof d) 0.05-10% by weight additives the sum a) to d) yield 100% by weight.

The present invention further claims the semi-aromatic polyamide has a melting point of at least 280°C and derived from terephthalic acid, adipinic acid and hexamethylene diamine.

Kleiner et al. teach a molding composition comprising a polyamide and a phosphoric acid salt of the formula (I) and/or a diphosphoric acid salt of the formula (II)



Where

R¹ and R² are identical or different and are C₁-C₁₆ -alkyl,

R³ is C₁—C₁₀ -alkylarylene, linear or branched, arylene, alkylarylene, arylalkylene,

M is a calcium or aluminum ion;

m is 2 or 3; n is 1 or 3; x is 1 or 2 (see column 1, lines 40 - 64).

Regarding claim 9, the present invention claims flameproof polyamide molding composition according to claim 1, wherein there is used as flame retardant b) a phosphinic acid salt of formula (I) and/or a diphosphinic acid salt of formula (II) and/or polymers thereof, wherein M stands for calcium or aluminum ions.

Kleiner et al. teach the molding material comprising a polyamide and a phosphinic or diphosphinic acid salt of the metals calcium or aluminum (see column 1, lines 65 – 67).

Regarding claim 10, the present invention claims flameproof polyamide molding composition according to claim 1, wherein the phosphinic acid salt used as flame retardant is contained in a quantity of 1-30% by weight, preferably 5-25% by weight, particularly preferred 8-20% by weight, relative to the total formulation.

Kleiner et al. teach the amount of phosphinic acid salt added to the polymers is preferably 10 to 25% by weight (see column 3, lines 3 – 10 and claim 4).

Regarding claim 11, the present invention claims polyamide molding composition's additive is selected from stabilizers, processing aids, anti-dripping agents, dyes and/or pigments.

Kleiner et al. teach the polyamide molding material can also comprise fillers and reinforcing materials, minerals, dyes, stabilizers, lubricants, molding aids and other customary additives (see column 4, lines 4 – 9).

Regarding claim 12 and 13, the present invention claims the use of the flameproof molding composition according to claim 1 for producing molded articles and which fulfill the requirement according to the UL 94-flammability classification VO found with test pieces with a thickness of 0.4mm.

Kleiner et al. teach the polyamide molding materials have the following useful applications: electrical components, such as coil formers, transformers, relays, switches, plug connectors, motors and motor parts (see column 3, lines 56 – 67). Furthermore, the property shown in the claim 13 is an inherent property.

Kleiner et al. differ from the present invention in that the polymeric material used in the molding composition is not based on semi-aromatic and partly crystalline polyamides.

Koch et al., on the other hand, in "Thermoplastic molding materials based on polyamide blends" disclose that in amide polymers in which some of the aliphatic units have been replaced by aromatic units and are partly crystalline polyamines with melting points of the of 260°C to above 300°C have not only **good heat resistance but also good rigidity and a generally good property profile** (see column 1, lines 42 – 68 and column 3, lines 30 – 34). The partly aromatic amide copolymers contain units derived from terephthalic acid and hexamethylenediamine. A small proportion of the terephthalic acid can be replaced by isophthalic acid. In light of such benefit, it would be obvious to one ordinary skill in the art at the time of invention was made to utilize the semi-aromatic and partially crystalline polyamides taught by **Koch et al.** and thereby combine with salts of phosphinic acids disclosed by **Kleiner et al.** to produce molded articles that have good dimensional stability at high temperatures.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim s 12 and 13 provide for the use of flameproof molding compositions, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it

merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 12 and 13 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Correspondence

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATNAF ADMASU whose telephone number is (571)270-5465. The examiner can normally be reached on M-F 7:30-5.00, Alternative Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/
Primary Examiner, Art Unit 1796

ATNAF ADMASU
Examiner
Art Unit 4171

/ASA/